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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,413	05/16/2005	Kenneth Sundberg	PR/3-23156/A/RAI 56/PCT	4017

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CIBA SPECIALTY CHEMICALS CORPORATION
PATENT DEPARTMENT
540 WHITE PLAINS RD
P O BOX 2005
TARRYTOWN, NY 10591-9005

EXAMINER	
CORDRAY, DENNIS R	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/517,413	SUNDBERG ET AL.	
	Examiner	Art Unit	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *14 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/28/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tansley et al in view of Fakoukakis et al (4956478).

Tansley et al discloses a sized paper or board, wherein the sizing agent comprising alkenyl succinic anhydride, or ASA is added to the aqueous pulp slurry (Abstract; col 4, lines 23-26; col 5, lines 55-60). The board is coated on both sides with polyethylene (barrier coating of a food grade material) (col 1, lines 12-18; col 3, line 25). Tansley et al discloses a method for producing a carton comprising forming a sized paper or board, treating with hot hydrogen peroxide (sterilizing), then forming a packaging unit (carton) from the board (col 3, lines 3-28). The sizing agent is provided by an aqueous dispersion (col 3, lines 19 and 20).

Tansley et al does not disclose the polymeric residues or olefin content of the ASA.

Fakoukakis et al discloses method for making a nearly pure ASA (Abstract; col 4, lines 23-26). While the polymeric residues and olefin content of the nearly pure ASA are not disclosed, examples are given of a product comprising about 99% ASA (col 5,

lines 33-36; col 6, lines 1-3), thus having a maximum combined content of polymer residues and olefins of about one percent. Fakoukakis et al also discloses that the alkenyl succinic anhydrides have substantially no polymeric residue contamination (col 2, lines 13-20; claim 1). Substantially no polymeric residue is interpreted as a level low enough not to have any impact on the structure or performance of the product. The alkenyl succinic anhydrides of Fakoukakis et al are thus substantially the same as those of the instant invention. ASA is a well known reactive size used in papermaking.

The art of Tansley et al, Fakoukakis et al and the instant invention are analogous as pertaining to the use of ASA. It would have been obvious to one of ordinary skill in the art to use ASA with the claimed impurities in the paper of Tansley et al in view of Fakoukakis et al as a well known sizing agent and to avoid unwanted by-products.

Response to Arguments

Applicant's arguments, see pp 5-6, filed 8/14/2006, with respect to the rejection of Claims 10-12 under 35 U.S.C. 102(b) or under 35 U.S.C. 103(a) over Tansley et al have been fully considered and are persuasive. The rejection of has been withdrawn.

In regard to the stated advantages on p 7 of the claimed invention over alkenyl succinic anhydrides having 7-9% polymeric residue, the table on p 13 recites properties for the paper on reels 1A (invention) and 12 (comparative), as defined on p 11, last par and p 12, next to last par. It appears that the properties listed in the table for the comparative sample, reel 12 are superior to those of the invention, reel 1A according to the description of the tests in Appendix I, pp 13-14. The Cobb and HST values are lower for reel 12, indicating better sizing of the paper and the lactic acid and Peroxide

REP values are lower for reel 12, indicating better sizing of the paper. Thus, from the table, it appears that the presence of polymeric residues imparts better sizing characteristics than its absence.

Applicant's arguments with respect to the rejection of Claims 1-12 under 35 U.S.C. 103(a) over Tansley et al in view of Fakoukakis et al have been fully considered but they are not persuasive.

Applicant argues on pp 7-9 that Fakoukakis et al says nothing about the purity of the alkenyl succinic anhydride residue and that there can still be an undefined amount of polymeric residues and even unreacted olefins and maleic anhydride. Applicant further argues that the process of Fakoukakis et al is entirely conventional and does not remove polymeric residues. Applicant argues that the process is a conventionally known distillation that removes the excess unreacted olefin.

Fakoukakis et al discloses that using specific species and ratios of starting olefins resulted in substantially no polymeric residue contamination of the alkenyl succinic anhydrides and that the product is usable without purification by subsequent distillation is needed beyond the conventional step of removing olefins and maleic anhydride (col 2, lines 13-20; claim 1). The product is disclosed with a 99% purity in examples (cols 5-6, Examples 10-11), thus the maximum combined content of polymer residues and olefins is about one percent. Substantially no polymeric residue is interpreted as a level low enough so as not to have any impact on the structure or performance of the product. The alkenyl succinic anhydrides of Fakoukakis et al are thus substantially the same as those of the instant invention. It would have been

obvious to one of ordinary skill in the art to use the alkenyl succinic anhydrides of Fakoukakis et al in the product of Tansley et al to avoid unwanted by-products and to eliminate the cost of an extra distillation step.

The rejection of Claims 1-12 under 35 U.S.C. 103(a) over Tansley et al in view of Fakoukakis et al is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRC

STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700